

Raised bill no. 1117

Dear Representative Roy, Senator Meyer and distinguished members of the Environment Committee,

Nations around the world have researched the impact of prescription drugs and personal care products and their effect on lakes, rivers, and oceans since 1995. The Long Island Sound Assembly 2010 report has indicated to the Connecticut State Legislature that research in this matter is crucial and recommended at this time. Although Raised Bill No. 1117 is a step in the right direction it is extremely limiting in its scope and in my view inadequate in addressing the complexity of the problem. The major source of drugs that enter the environment do so by way of excrement both urine and fecal matter. Although unused drugs contribute to the problem the great majority of compounds and metabolites are released into the water by way of sewage treatment plants, veterinary waste and agricultural runoff.

I am currently doing an Environmental research project at SCSU focusing on this very issue and much of the current data comes from the U.S. Geological Survey and the Center for Disease Control as well as from foreign researchers.

The majority of the drugs entering the sewage treatment plants have been designed to target human beings and their action on non-target species and organisms is unknown. A great many of the pharmaceutically active compounds (phAC's) entering the environment are anti-inflammatory and analgesic drugs. This particular study found that Ibuprofen which is consumed in mass quantities around the globe and when excreted can be "high in acute toxicity...and is suspected of endocrine disrupting activities in humans and wildlife." Interestingly enough a study done on the *Die Off* of New England lobsters also found that "the increased frequency of molts in the stage IV larvae and the historical observation of berried females, dying while attempting to molt raise the possibility that methoprene could be responsible for endocrine disruption in larval and adult lobsters (Walker Bush, Puritz and Wilson et al)." Ibuprofen like methoprene can disrupt endocrine function.

Another drug that is high on the list of consumed drugs is Diclofenac (DCF) which is an anti-inflammatory and according to Ziyan (2011) has the highest acute aquatic toxicity within the class of ANs and AIs...ingestion of DCF by birds while scavenging on livestock results in death shortly after exposure." Diclofenac in the form of metabolites can readily be found in sewage treatment effluents and the passage of these to Long Island surface waters could comprise the health and well-being of shore birds. This same drug has also been known to compromise kidney and liver function in fish.

Although I applaud the Legislatures recognition of this vexing problem I find Raised bill No. 1117 cursory at best. I hope you will consider valid and sustained research into this matter and legislation that will target sewage treatment plants as well as veterinary waste and run off from agriculture rather than focusing on pre-existing guidelines. I would be happy to share with the committee my findings as I explore this complex issue.

Sincerely,

Lori Fogler-Nicholson

SCSU Student and Intern for Rep Diana Urban